

## \# Project 1 - ETL with Airflow

This project consists of an ETL pipeline built with Apache Airflow containerised in Docker and utilising PostgreSQL.

### \## Project Overview

This project demonstrates an ETL pipeline using Apache Airflow containerised in Docker.

The project consists of the following:

- \* Extracts <data> data from <source>
- \* Transforms data into a load-able format (data cleaning if applicable)
- \* Loads transformed data into a PostgreSQL Database through Airflow
- \* Uses DAGs inside Airflow to schedule and perform tasks

### \## Tools Used:

Workflow: Apache Airflow

Containerisation: Docker

Data Source: REST Countries API (<https://restcountries.com>)

Data Store: PostgreSQL

Documentation: READMEs across multiple folders

Project Management: Trello

### \## Pipeline Design:

![[graph](project1\_graph.png)]

### \## Setting up the environment:

#### \### 1. Clone the Repository from GitHub

```
git clone <>
```

```
cd "Project 1 - Airflow"
```

#### \### 2. Run in your preferred environment

Open with PyCharm (or any other IDE)

Set up a virtual environment with PyCharm or your preferred Python interpreter

to read and run the .py files

\### 3. Start Docker with the .yaml file

Type "docker compose up" on any terminal when Docker Desktop is running. When done with the "-d" flag it will run in disjointed format

Type "docker compose down" for when you want to stop and delete the containers whilst retaining the images

\### 4. Access Airflow UI

Open your preferred browser and enter "http://localhost:8080" when Docker is running or click 8080:8080 on the "containers" section of Docker Desktop